

Carbondale Wireless Initiative

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Submitted to:

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Project Specifications



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Background

The City of Carbondale was awarded a grant from the Lieutenant Governor's "Wireless Main Street" program. The intention of the grant is to provide free high speed wireless internet service for Carbondale. This project will create a "wifi" network that is free for public use.

The Carbondale Wireless Initiative will provide the technology necessary to provide free wireless internet service within specific service locations in Carbondale. The request for proposals will delineate the minimum specifications for this project. Proposals will be reviewed for recommendation to the City Council of Carbondale.

The project specifications define the standards that the City will use to compare proposals. Proposals will be compared based on a return on investment criteria.

Applicants will have until December 8, 2006 to submit proposals to the City of Carbondale. Applicants will submit a timeline for the execution of their proposal. Applicants are responsible for all installation, configuration and testing of the technology in their proposal.

Service Locations

Each service location listed below will be equipped with a wireless access point.

Carbondale City Hall / Civic Center

200 South Illinois Avenue

Carbondale Public Library

405 West Main

Memorial Hospital of Carbondale

405 West Jackson Street

Town Square Pavilion

W. Main and S. Illinois Ave.

Veterans Plaza

W. Main and S. Washington

Friendship Plaza

S. Illinois Ave. and W. Mill Street

Old IC Passenger Depot

111 S. Illinois Ave.

Backbone Network

The City of Carbondale will provide internet service at City Hall. All of the service locations must be served from this location. The project will require a backbone network to be implemented between the service locations. This network must provide secure access between City Hall and all wireless access points.

Tower at Public Works

N. Michaels and W. Willow

The tower at Public Works is part of the backbone network and will not require a wireless access point.

Minimum Software Specifications

Wireless Access Point Management Tools

Wireless access points must be manageable from one central location. Documentation must be available for review during the RFP process.

Captive Portal

A captive portal system presents wireless internet users with a web page that allows a user to login to the system. A captive portal system is a technique that most wireless internet service providers use.

A captive portal must be implemented on the network in order to authenticate users on the network. This captive portal must allow the City of Carbondale to change the content on the captive portal. The captive portal must allow the City to assign levels of service based on user login.

Users on the network will be limited to two hours of access within a 24 hour period. The captive portal must include the ability to implement this security policy. The captive portal must be able to comply with policies defined within the protocol for secure access.

The captive portal must be able to integrate with other internet service providers for authentication. This integration technology is not required for this project at this time, but the costs for this capability should be indicated in this proposal. An example of such technology would be the implementation of a RADIUS server.

Documentation of the captive portal must include reporting tools and security capabilities for review during the RFP process.

Minimum Hardware Specifications

The City of Carbondale will provide space for hosting equipment at City Hall. There is space for a tower on the rooftop of City Hall. The City of Carbondale will provide access to City-owned towers when necessary. Proposal must include all necessary hardware to complete the project.

All hardware must be listed individually and include manufacturer and model specifications.

Wireless Access Point

A Wireless Access Point (WAP) provides internet access directly to the end user. Each WAP must comply with IEEE 802.11b standards. The WAP must comply with FCC regulations. In outdoor service locations, WAP must be designed to withstand the extremes of outdoor application. The WAP's must comply with protocols defined within the protocol for secure access.

WAP's will be configured with live IP addresses on the backbone network, while providing NAT (Network Address Translation) to the service area. In most systems, this means that a captive portal will run directly on each WAP, while user authentication and reporting is handled by a central server.

Antennas

All antennas must be secured and grounded in accordance with the 2005 Edition of the National Electrical Code. All antennas must include lightning arrestors between the antenna and the WAP. Antennas must be designed with an efficient enough dBi rating to provide service to the entire service location. Antennas on towers must not create a wind load hazard.

Amplifiers

Amplifiers must be configured to comply with FCC regulations. Amplifiers must be secured and grounded in accordance with the 2005 Edition of the National Electrical Code.

Privacy Policy & Protocol for Secure Access

The City of Carbondale will provide a privacy policy that adheres to Federal standards. The privacy policy must be presented to each user within the captive portal of the network. All users of the network must agree to the privacy policy in order to gain access to internet resources.

A proposal must include the ability to implement a privacy policy and protocol for secure access on a captive portal. A proposal should describe how the protocol will be implemented.

The protocol for secure access has the following requirements:

Users on the network will be limited to two hours of access within a 24 hour period.

Request for Proposals Process

The City of Carbondale will review the proposals based on the following criteria:

- Hardware Specifications
- Software Specifications
- Backbone Network
- Cost

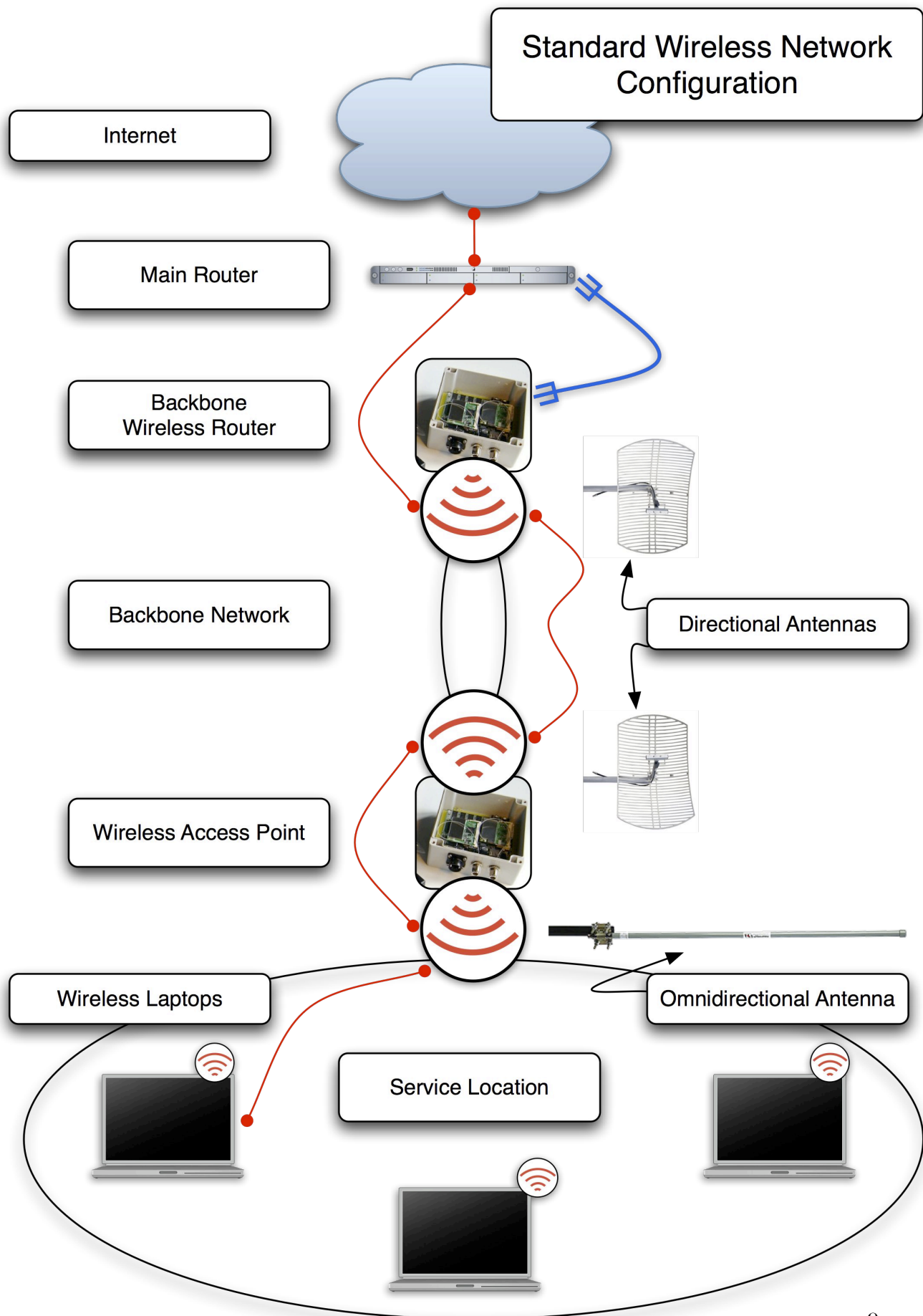
The City will accept proposals until December 8, 2006.

Proposals will include all installation, configuration and training costs.
Proposals will include a timeline for implementation.

Once the proposal is accepted, the timeline for implementation will begin.

Submission must be sent to:

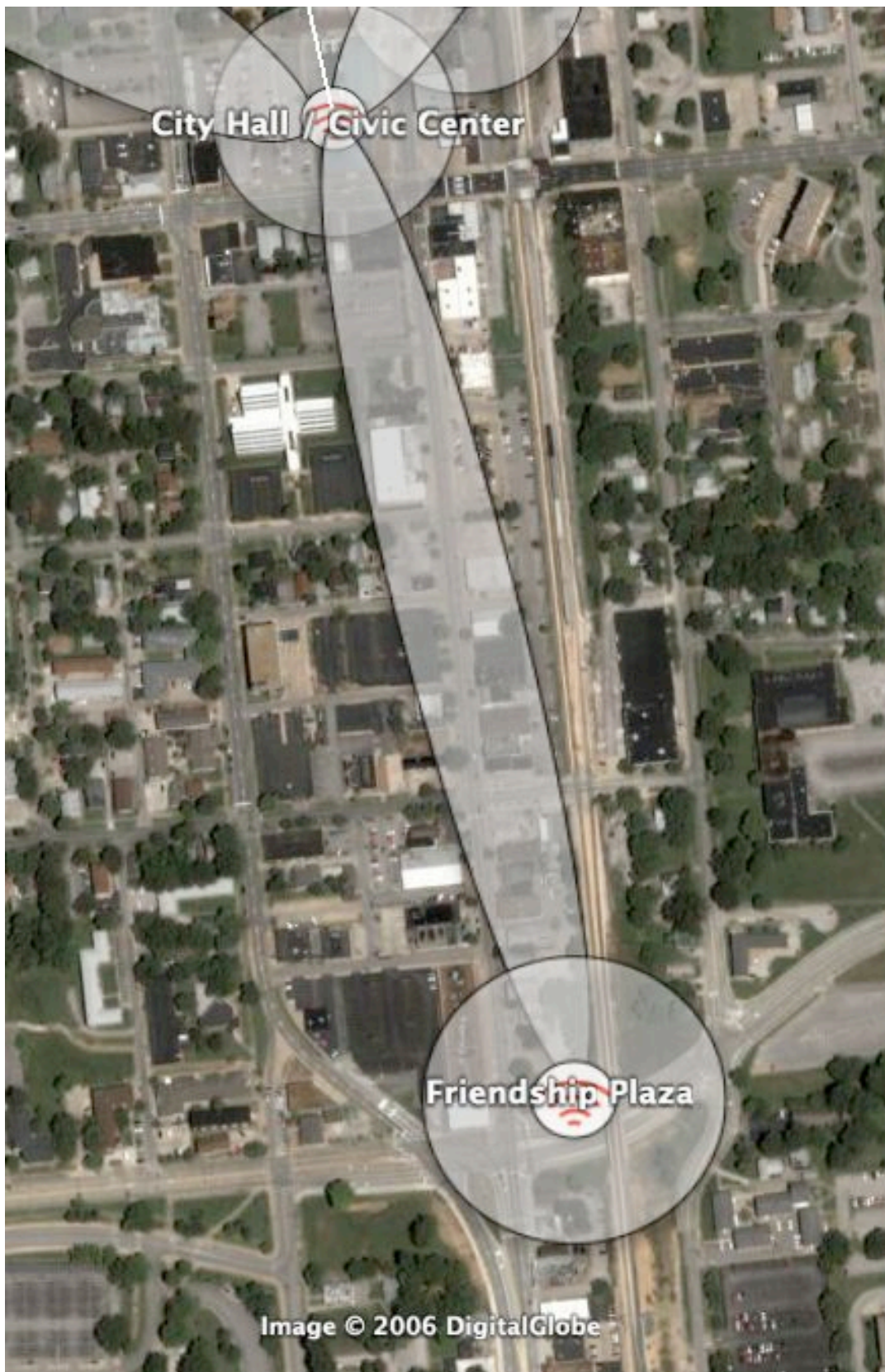
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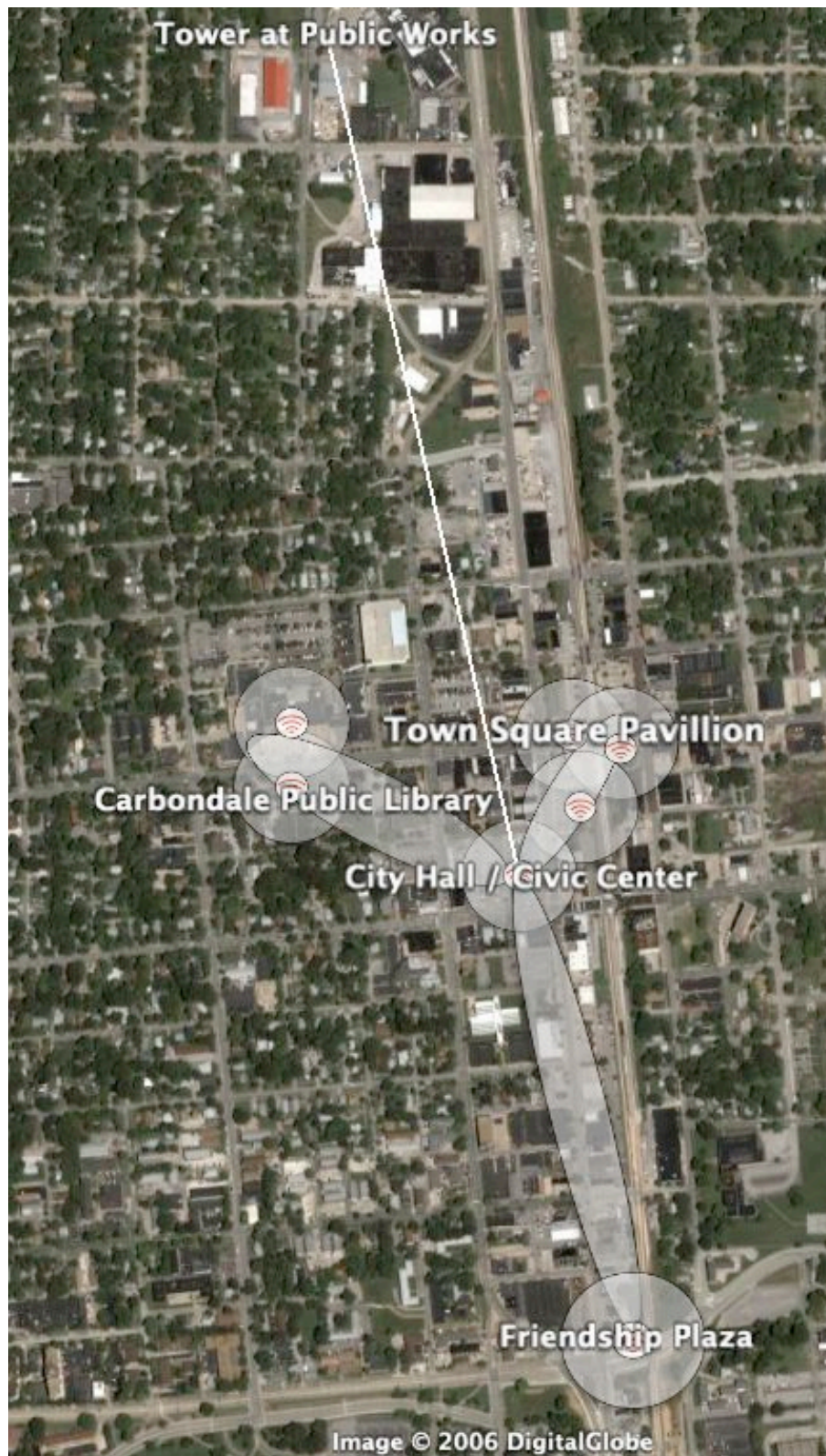


Example diagram wireless access points and backbone network configuration.

Not drawn to scale, or representative of actual coverage area.



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